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=> s lipid transfer protein
L4 1527 LIPID TRANSFER PROTEIN

=> s l4 and (disease resistan?)
L5 24 L4 AND (DISEASE RESISTAN?)

=> duplicate remove l5
L6 15 DUPLICATE REMOVE L5 (9 DUPLICATES REMOVED)

=> d ti 1-15

L6 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
TI Sunflower genes induced by infection with Sclerotinia and their promoters and their uses

L6 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS
TI Plant defense-inducible genes and their use in improving **disease resistance** in transgenic plants

L6 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
TI A putative **lipid transfer protein** involved in systemic resistance signalling in Arabidopsis

L6 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2003 ACS
TI From elicitins to lipid-transfer proteins: a new insight in cell signalling involved in plant defence mechanisms

L6 ANSWER 5 OF 15 AGRICOLA DUPLICATE 2
TI Induction of pepper cDNA encoding a **lipid transfer protein** during the resistance response to tobacco mosaic virus.

L6 ANSWER 6 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Cloning and promoter analysis of a barley gene encoding a **lipid transfer protein**.

L6 ANSWER 7 OF 15 CABA COPYRIGHT 2003 CABI
TI Isolation of defense-related rice genes by differentially screening a blast fungus-induced cDNA library
Rice Research Studies 2000.

L6 ANSWER 8 OF 15 AGRICOLA DUPLICATE 3
TI Molecular markers for ozone stress isolated by suppression subtractive hybridization: specificity of gene expression and identification of a novel stress-regulated gene.

L6 ANSWER 9 OF 15 CABA COPYRIGHT 2003 CABI
TI Characterization of a new antifungal non-specific **lipid transfer protein** (nsLTP) from sugar beet leaves.

L6 ANSWER 10 OF 15 CABA COPYRIGHT 2003 CABI
TI Cauliflower mosaic virus infection stimulates **lipid transfer protein** gene expression in Arabidopsis.

L6 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
TI Gene encoding for systemic acquired resistance in Arabidopsis

L6 ANSWER 12 OF 15 AGRICOLA
TI Coordinate accumulation of antifungal proteins and hexoses constitutes a developmentally controlled defense response during fruit ripening in grape.

L6 ANSWER 13 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Genetic engineering of **disease resistance** in cereals.

L6 ANSWER 14 OF 15 AGRICOLA DUPLICATE 4
TI Enhanced tolerance to bacterial pathogens caused by the transgenic expression of barley **lipid transfer protein** LTP2.

L6 ANSWER 15 OF 15 CABA COPYRIGHT 2003 CABI
TI A potent antimicrobial protein from onion seeds showing sequence homology to plant lipid transfer proteins.

=> d bib abs 14 3

L6 ANSWER 14 OF 15 AGRICOLA DUPLICATE 4

AN 1998:33943 AGRICOLA
DN IND20905018
TI Enhanced tolerance to bacterial pathogens caused by the transgenic expression of barley **lipid transfer protein** LTP2.
AU Molina, A.; Garcia-Olmedo, F.
AV DNAL (QK710.P68)
SO The Plant journal : for cell and molecular biology, Sept 1997. Vol. 12, No. 3. p. 669-675
Publisher: Oxford : Blackwell Sciences Ltd.
ISSN: 0960-7412
NTE Includes references
CY England; United Kingdom
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB Purified **lipid transfer protein** LTP2 from barley applied on tobacco leaves eliminated symptoms caused by infiltration of Pseudomonas syringae pv. tabaci 153. Growth of the pathogen in leaves of transgenic tobacco plants was retarded when compared with non-transformed controls. The percentage of inoculation points that showed necrotic lesions was greatly reduced in transgenic tobacco (17- 38% versus 78%) and the average size of these lesions was 61-81% that of control. The average total lesion area (necrosis and chlorosis) in the transgenic plants was also reduced (38% of control). Arabidopsis thaliana transgenic plants inoculated with P. syringae pv. tomato DC3000 also had lower percentages of necrotic lesions (22-38% versus 76%), a reduced average area for each lesion (53-67% of control), and a smaller total lesion area per inoculation (43% of control). These results further support the assignment of a defense role for LTPs and highlight their biotechnological potential.

L6 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
AN 2002:735327 CAPLUS
DN 138:22248
TI A putative **lipid transfer protein** involved in systemic resistance signalling in Arabidopsis
AU Maldonado, Ana M.; Doerner, Peter; Dixon, Richard A.; Lamb, Chris J.; Cameron, Robin K.
CS The Salk Institute, La Jolla, CA, 92037, USA
SO Nature (London, United Kingdom) (2002), 419(6905), 399-403
CODEN: NATUAS; ISSN: 0028-0836
PB Nature Publishing Group
DT Journal
LA English
AB Localized attack by a necrotizing pathogen induces systemic acquired resistance (SAR) to subsequent attack by a broad range of normally virulent pathogens. Salicylic acid accumulation is required for activation of local defenses, such as pathogenesis-related protein accumulation, at the initial site of attack, and for subsequent expression of SAR upon secondary, distant challenge. Although salicylic acid moves through the plant, it is apparently not an essential mobile signal. We screened Agrobacterium tumefaciens transfer DNA (tDNA) tagged lines of Arabidopsis thaliana for mutants specifically compromised in SAR. Here we show that Defective in induced resistance 1-1 (dir1-1) exhibits wild-type local resistance to avirulent and virulent Pseudomonas syringae, but that pathogenesis-related gene expression is abolished in uninoculated distant leaves and dir1-1 fails to develop SAR to virulent Pseudomonas or Peronospora parasitica. Petiole exudate expts. indicate that dir1-1 is defective in the prodn. or transmission from the inoculated leaf of an essential mobile signal. DIR1 encodes a putative apoplastic **lipid transfer protein** and we propose that DIR1 interacts with a lipid-derived mol. to promote long distance signalling.
RE.CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> logoff hold
STN INTERNATIONAL SESSION SUSPENDED AT 18:02:19 ON 19 FEB 2003

=> file agricola biosis caplus caba

=> s lipid transfer protein
L1 1529 LIPID TRANSFER PROTEIN

=> s l1 and review
L2 75 L1 AND REVIEW

=> duplicate remove l2
L3 71 DUPLICATE REMOVE L2 (4 DUPLICATES REMOVED)

=> d ti 1-25

L3 ANSWER 1 OF 71 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1

TI Cholesteryl ester transfer protein facilitates the movement of water-insoluble drugs between lipoproteins: A novel biological function for a well-characterized **lipid transfer protein**.

L3 ANSWER 2 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Cryoprotectin a plant **lipid transfer protein** homologue that stabilizes membranes during freezing

L3 ANSWER 3 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI **Lipid transfer protein** as a potential panallergen?

L3 ANSWER 4 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI From elicitins to lipid-transfer proteins: a new insight in cell signalling involved in plant defence mechanisms

L3 ANSWER 5 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Involvement of lipid-protein complexes in plant-microorganism interactions

L3 ANSWER 6 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Are hydrophobins and/or non-specific lipid transfer proteins responsible for gushing in beer? New hypotheses on the chemical nature of gushing inducing factors

L3 ANSWER 7 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Roles of plasma lipid transfer proteins in reverse cholesterol transport

L3 ANSWER 8 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Expression and regulation of **lipid transfer protein** genes in cotton fiber

L3 ANSWER 9 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI The spectrum of olive pollen allergens

L3 ANSWER 10 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI 1999 George Lyman Duff Memorial Lecture: Lipid transfer proteins, HDL metabolism, and atherogenesis

L3 ANSWER 11 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI The role of the microsomal triglyceride transfer protein in abetalipoproteinemia

L3 ANSWER 12 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Progress in the studies of plant **lipid-transfer protein**

L3 ANSWER 13 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Structural biology of allergens

L3 ANSWER 14 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI New aspects of sterol carrier protein 2 (nonspecific **lipid-transfer protein**) in fusion proteins and in peroxisomes

L3 ANSWER 15 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Sterol carrier protein-2 (SCP2). The **review** of its physiological role

L3 ANSWER 16 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Receptors and lipid transfer proteins in HDL metabolism

L3 ANSWER 17 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Lipid transfer proteins and receptors in HDL metabolism

L3 ANSWER 18 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Sterol carrier protein-2

L3 ANSWER 19 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Moderate alcohol consumption and high density lipoproteins

L3 ANSWER 20 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Structure, biological, and technological functions of lipid transfer proteins and indolines, the major lipid binding proteins from cereal kernels

L3 ANSWER 21 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Non-specific **lipid transfer protein** (sterol carrier protein 2) and peroxisomal fatty acid .beta.-oxidation

L3 ANSWER 22 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI The role of the microsomal triglyceride transfer protein in the assembly and secretion of plasma lipoproteins

L3 ANSWER 23 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Stanol esters as a dietary adjunct to cholesterol-lowering therapies

L3 ANSWER 24 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI Cell and molecular biology of the assembly and secretion of apolipoprotein B-containing lipoproteins by the liver

L3 ANSWER 25 OF 71 CAPLUS COPYRIGHT 2003 ACS
TI The non-specific **lipid transfer protein** (sterol carrier protein 2) acts as a peroxisomal fatty acyl-CoA binding protein

=> d bib abs 4 12

L3 ANSWER 4 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 2002:527269 CAPLUS
DN 137:229234
TI From elicitins to lipid-transfer proteins: a new insight in cell signalling involved in plant defence mechanisms
AU Blein, Jean-Pierre; Coutos-Thevenot, Pierre; Marion, Didier; Ponchet, Michel
CS INRA, Laboratoire de Phytopharmacie et de Biochimie des Interactions Cellulaires, UMR 692 INRA/Universite de Bourgogne, Dijon, 21065, Fr.
SO Trends in Plant Science (2002), 7(7), 293-296
CODEN: TPSCF9; ISSN: 1360-1385
PB Elsevier Science Ltd.
DT Journal; General Review
LA English
AB A **review**. Elicitins and lipid-transfer proteins are small cysteine-rich lipid-binding proteins secreted by oomycetes and plant cells, resp., that share some structural and functional properties. In spite of intensive work on their structure and diversity at the protein and genetic levels, the precise biol. roles of lipid-transfer proteins remains unclear, although the most recent data suggest a role in somatic embryogenesis, in the formation of protective surface layers and in defense against pathogens. By contrast, elicitins are known elicitors of plant defense, and recent work demonstrating that elicitins and lipid-transfer proteins share the same biol. receptors gives a new perspective to understand the role played by lipid binding proteins, mainly the early recognition of intruders in plants. Relationships between elicitins and plant lipid transfer proteins in host-pathogen interactions.
RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 12 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 2000:565790 CAPLUS
DN 134:39472
TI Progress in the studies of plant **lipid-transfer protein**
AU Zhang, Ming-Yong; Liang, Cheng-Ye
CS China Institute of Botany, The Chinese Academy of Sciences, Canton, 510650, Peop. Rep. China
SO Shengwu Huaxue Yu Shengwu Wuli Jinzhan (2000), 27(3), 244-247
CODEN: SHYCD4; ISSN: 1000-3282
PB Shengwu Huaxue Yu Shengwu Wuli Jinzhan Bianjibu
DT Journal; General Review
LA Chinese
AB A **review** with 28 refs. Lipid-transfer proteins (LTPs) are a group of basic, small (9 ku) proteins which transfer lipids between biomembranes by in vitro assays. So they are thought to participate in the lipid transferring during biomembrane synthesis. Their purifn., structure, gene expression and biol. functions have been studied in various monocotyledonous and dicotyledonous plants. The latest studies found that they are secreted and located in the cell wall, and that it is suggested that plant LTPs are possibly related with cutin formation,. defense reactions against phytopathogens and plant adaptation to various environmental stresses.

=> d bib abs 26-50

L3 ANSWER 26 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1998:481356 CAPLUS
DN 129:200888
TI Plasma lipid transfer proteins, high-density lipoproteins, and reverse cholesterol transport
AU Bruce, Can; Chouinard, Roland A., Jr.; Tall, Alan R.
CS Division of Molecular Medicine, Department of Medicine, Columbia University, New York, NY, 10032, USA
SO Annual Review of Nutrition (1998), 18, 297-330
CODEN: ARNTD8; ISSN: 0199-9885
PB Annual Reviews Inc.
DT Journal; General Review
LA English
AB A **review** with 133 refs. Cholesteryl ester transfer protein

(CETP) and phospholipid transfer protein (PLTP) are members of the lipid transfer/lipopolysaccharide binding protein gene family. Recently, the crystal structure of one of the members of the gene family, bactericidal permeability increasing protein, was solved, providing potential insights into the mechanisms of action of CETP and PLTP. These mols. contain intrinsic lipid binding sites and appear to act as carrier proteins that shuttle between lipoproteins to redistribute lipids. The phenotype of human CETP genetic deficiency states and CETP transgenic mice indicates that CETP plays a major role in the catabolism of high-d. lipoprotein (HDL) cholesteryl esters and thereby influences the concn., apolipoprotein content, and size of HDL particles in plasma. PLTP also appears to have an important role in detg HDL levels and speciation. Recent data indicate that genetic CETP deficiency is assocd. with an excess of coronary heart disease in humans, despite increased HDL levels. Also, CETP expression is anti-atherogenic in many mouse models, even while lowering HDL. These data tend to support the reverse cholesterol transport hypothesis, i.e. that anti-atherogenic properties of HDL are related to its role in reverse cholesterol transport. Recently, another key mol. involved in this pathway was identified, scavenger receptor BI; this mediates the selective uptake of HDL cholesteryl esters in the liver and thus constitutes a pathway of reverse cholesterol transport parallel to that mediated by CETP. Reflecting its role in reverse cholesterol transport, the CETP gene is up-regulated in peripheral tissues and liver in response to dietary or endogenous hypercholesterolemia. An anal. of the CETP proximal promoter indicates that it contains sterol regulatory elements highly homologous to those present in 3-hydroxy-3-methylglutaryl-CoA reductase, the CETP gene is transactivated by the binding of SREBP-1 to these elements. A challenge for the future will be the manipulation of components of the reverse cholesterol transport pathway, such as CETP, PLTP, or scavenger receptor BI for therapeutic benefit.

RE.CNT 97 THERE ARE 97 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L3 ANSWER 27 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1997 394489 CAPLUS
DN 127:118622
TI Phospholipid transfer proteins revisited
AU Wirtz, Karel W. A.
CS Inst. of Biomembranes, Centre for Biomembranes and Lipid Enzymology, Utrecht Univ., Utrecht, 3508 TB, Neth.
SO Biochemical Journal (1997), 324(2), 353-360
CODEN: BIJOAK, ISSN: 0264-6021
PB Portland Press
DT Journal, General Review
LA English
AB A **review** with 95 refs. Phosphatidylinositol transfer protein (PI-TP) and the nonspecific **lipid transfer protein** (nsL-TP) (identical with sterol carrier protein 2) belong to the large and diverse family of intracellular lipid-binding proteins. Although these two proteins may express a comparable phospholipid transfer activity in vitro, recent studies in yeast and mammalian cells have indicated that they serve completely different functions. PI-TP (identical with yeast SEC14p) plays an important role in vesicle flow both in the budding reaction from the trans-Golgi network and in the fusion reaction with the plasma membrane. In yeast, vesicle budding is linked to PI-TP regulating Golgi phosphatidylcholine (PC) biosynthesis with the apparent purpose of maintaining an optimal PI/PC ratio of the Golgi complex. In mammalian cells, vesicle flow appears to be dependent on PI-TP stimulating phosphatidylinositol, 4,5-bisphosphate (PIP2) synthesis. This latter process may also be linked to the ability of PI-TP to reconstitute the receptor-controlled PIP2-specific phospholipase C activity. The nsL-TP is a peroxisomal protein which, by its ability to bind fatty acyl-CoAs, is most likely involved in the .beta.-oxidn. of fatty acids in this organelle. This protein constitutes the N-terminus of the 58 kDa protein which is one of the peroxisomal 3-oxo-acyl-CoA thiolases. Further studies on these and other known phospholipid transfer proteins are bound to reveal new insights in their important role as mediators between lipid metab. and cell functions.

L3 ANSWER 28 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1998 547263 CAPLUS
DN 129:258079
TI Molecular aspects of epididymal function and sperm maturation
AU Kirchhoff, C.
CS IHF Inst. Hormone and Fertility Res., Hamburg Univ., Hamburg, Germany
SO Current Advances in Andrology, Proceedings of the International Congress of Andrology, 6th, Salzburg, May 25-29, 1997 (1997), 253-259. Editor(s): Waites, Geoffrey M. H.; Frick, Julian; Baker, Gordon W. H. Publisher: Monduzzi Editore, Bologna, Italy.
CODEN: 66MSAS
DT Conference; General Review
LA English
AB A **review** with 25 refs. Abundant human epididymal proteins were cloned from cDNA libraries on the basis of their tissue specificity and frequency of expression. Characterization on a mol. level, including cDNA

sequencing, Northern analyses, in situ hybridization, immunohistochem. employing antipeptide antibodies, and primary cell culture techniques, has provided insight into their synthesis and regulation in the epithelium, and into the sperm/secretion interrelationship in the lumen of the human epididymal duct.

L3 ANSWER 29 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1997:493006 CAPLUS
DN 127:187010
TI Lipid-transfer proteins: tools for manipulating membrane lipids
AU Bourgis, Fabienne; Kader, Jean-Claude
CS Laboratoire de Physiologie Cellulaire et Moleculaire, Centre National de la Recherche Scientifique URA 2135, Univ. Pierre et Marie Curie, Paris, F-75252, Fr.
SO Physiologia Plantarum (1997), 100(1), 78-84
CODEN: PHPLAI; ISSN: 0031-9317
PB Munksgaard
DT Journal; General Review
LA English
AB A a **review**, with about 50 refs. Like other eukaryotic cells, plant cells contain proteins able to bind or to transfer lipids. Since they are able to facilitate movements of various phospholipids between membranes and are also capable of binding fatty acids or acyl-CoAs, they have been termed lipid-transfer proteins (LTP). LTPs are basic proteins contg. 90 to 95 residues (mol. mass 9 kDa), eight of them being cysteines found in conserved locations. These proteins have been used to manipulate in vitro the lipid compn. of isolated membranes either from plant or mammalian sources. In addn. to purified LTPs, recombinant LTPs produced by genes expressed in microorganisms can be used for this purpose. Several genes coding for these proteins have been characterized in various plants with different patterns of expression. However, it remains to be investigated whether these recombinant proteins behave functionally as LTPs. The use of purified or recombinant LTPs is promising for the study of the effect of lipid compn. on membrane functional properties.

L3 ANSWER 30 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1996:331352 CAPLUS
DN 125:5440
TI Lipid-transfer proteins in plants
AU Kader, Jean-Claude
CS Lab. Physiologie Cellulaire Moleculaire, Univ. Pierre Marie Curie, Paris, 75252, Fr.
SO Annual Review of Plant Physiology and Plant Molecular Biology (1996), 47, 627-654
CODEN: ARPBEX; ISSN: 1040-2519
PB Annual Reviews
DT Journal; General Review
LA English
AB A **review** with 128 refs. Lipid-transfer proteins (LTP) are basic, 9-kDa proteins present in high amts. (as much as 4% of the total sol. proteins) in higher plants. LTPs can enhance the in vitro transfer of phospholipids between membranes and can bind acyl chains. On the basis of these properties, LTPs were thought to participate in membrane biogenesis and regulation of the intracellular fatty acid pools. However, the isolation of several cDNAs and genes revealed the presence of a signal peptide indicating that LTPs could enter the secretory pathway. They were found to be secreted and located in the cell wall. Thus, novel roles were suggested for plant LTPs: participation in cutin formation, embryogenesis, defense reactions against phytopathogens, symbiosis, and the adaptation of plants to various environmental conditions. The validity of these suggestions needs to be detd., in the hope that they will elucidate the role of this puzzling family of plant proteins.

L3 ANSWER 31 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1996:489098 CAPLUS
DN 125:136728
TI Determination of **lipid transfer protein** by radioassay
AU Takeuchi, Nozomu
CS Sch. Med., Ehime Univ., Japan
SO Lipid (1996), 7(4), 388-395
CODEN: LIPDET; ISSN: 0915-6607
PB Medikaru Rebyusha
DT Journal; General Review
LA Japanese
AB A **review** with 32 refs.

L3 ANSWER 32 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1996:730264 CAPLUS
DN 126:4579
TI Lipid transfer proteins: Structure, function and gene expression
AU Kader, Jean-Claude; Grosbois, Michele; Guerbette, Francoise; Jolliot, Alain; Oursel, Annette
CS Laboratoire de Physiologie Cellulaire et Moleculaire des Plantes, Universite Pierre et Marie Curie, Paris, F-75252/05, Fr.

SO Membranes: Specialized Functions in Plants (1996), 165-178. Editor(s): Smallwood, Margaret, Knox, J. Paul; Bowles, Dianna J Publisher: Bios Scientific Publishers, Oxford, UK.
CODEN: 63RKA8
DT Conference; General Review
LA English
AB A **review** with 66 refs. concerning the assay and purifn. of lipid-transfer proteins (LTPs), biochem. properties of LTPs, structure and mode of action of LTPs, cell localization and biogenesis, gene expression, and physiol. roles

L3 ANSWER 33 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1996:536055 CAPLUS
DN 125:211529
TI Modifications in plasma lipoprotein concentration and lipid composition regulate the biological activity of hydrophobic drugs
AU Wasan, Kishor M.
CS Faculty Pharmaceutical Sciences, Univ. British Columbia, Vancouver, BC, V6T 1Z3, Can.
SO Journal of Pharmacological and Toxicological Methods (1996), 36(1), 1-11
CODEN: JPTMEZ; ISSN: 1056-8719
PB Elsevier
DT Journal; General Review
LA English
AB A **review**, with .apprx.75 refs. The max. tolerated dose and pharmacokinetics of a drug is usually detd. in healthy human volunteers and animals. This data is then used to define the dosing recommendation for the diseased patient population. However, in the case of some hydrophobic drugs, the dose which is deemed nontoxic becomes ineffective and/or toxic when administered to the diseased patient. This observation might be explained by several lines of evidence which indicate that binding of drugs such as amphotericin B (AmpB) and cyclosporine (CSA) to plasma low-d. lipoprotein-(LDL) cholesterol is involved in the development of kidney toxicity Our preliminary studies have suggested that this phenomena might be due to increased **lipid transfer protein** (LTP 1) activity which promotes the transfer of AmpB from high-d lipoproteins to LDL. In addn., since LTP 1 function is regulated by the lipid content of plasma lipoproteins, we suggest that changes in lipoprotein compn that occur in dyslipidemia regulate the distribution of these and other hydrophobic drugs (i.e., annamycin and nystatin). The impact of these studies on hydrophobic drug therapy could have broad implications on how we evaluate and det. dosing of hydrophobic drugs in dyslipidemic patients. By understanding the mechanism(s) responsible for the distribution of hydrophobic compds. in the bloodstream, we are trying to define the effect of dyslipidemias on the plasma clearance and therapeutic index of hydrophobic compds.

L3 ANSWER 34 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:679930 CAPLUS
DN 123:77267
TI Plasma lipid transfer proteins
AU Tall, Alan
CS Dep. Med , Columbia Univ., New York, NY, 10032, USA
SO Annual Review of Biochemistry (1995), 64, 235-57
CODEN: ARBOAW; ISSN: 0066-4154
PB Annual Reviews
DT Journal; General Review
LA English
AB A **review** with 119 refs. The plasma lipid transfer proteins mediate the transfer and exchange of phospholipids and neutral lipids between the plasma lipoproteins. The cholesteryl ester transfer protein (CETP) and the phospholipid transfer protein (PLTP) are members of the lipid transfer/lipopolysaccharide binding gene family. The CETP contains binding sites for cholesteryl ester and triglycerides and probably acts by a carrier-mediated mechanism. The CETP mediates catabolism of HDL cholesteryl esters, with secondary decreases in HDL size and protein content. The CETP plays a central role in reverse cholesterol transport i.e. the centripetal movement of cholesterol from the periphery back to the liver CETP gene expression is upregulated in response to increased dietary cholesterol or endogenous hypercholesterolemia. Although CETP reduces HDL levels, its role in reverse cholesterol transport suggests a dominant anti-atherogenic action in vivo.

L3 ANSWER 35 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:706927 CAPLUS
DN 123:280723
TI Approach to in vivo function of nonspecific lipid transfer proteins in higher plants
AU Yamada, M.; Tsuboi, S.; Kosone, M.; Osafune, T.; Ehara, T.; Masuta, C.; Koiwai, A.; Muto, S.; Yuasa, T.; et al.
CS Department Bioscience and Technology, Hokkaido Tokai University, Sapporo, Japan
SO Plant Lipid Metabolism, [Papers presented at the International Meeting on Plant Lipids] -- 11th, Paris, June 26 July 1, 1994 (1995), Meeting Date 1994, 206-9. Editor(s) Kader, Jean-Claude; Mazliak, Paul. Publisher:

Kluwer, Dordrecht, Neth.
CODEN: 61OZAO
DT Conference; General Review
LA English
AB A **review** and discussion with 20 refs. on the approach from properties of non-specific lipid transfer proteins (nsLTP) isoforms, approach from the expression of nsLTP genes in plant organs, approach from intracellular behaviors of nsLTPs, and approach from involvement in signal transduction reaction.

L3 ANSWER 36 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1996:49850 CAPLUS
DN 124:113215
TI **Lipid transfer protein**: a natural stimulator of the sperm capacitation process
AU Muller, Charles H.; Ravnik, Stuart E.
CS Dep. of Urology, Univ. of Washington Sch. of Medicine, Seattle, WA, 98195, USA
SO Colloque INSERM (1995), 236(Human Sperm Acrosome Reaction), 67-84
CODEN: CINMDE; ISSN: 0768-3154
PB Editions INSERM
DT Journal; General Review
LA English
AB A **review**, with 36 refs., on the role of LTP-I in the loss of membrane cholesterol during sperm capacitation.

L3 ANSWER 37 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:318140 CAPLUS
DN 122:311370
TI Cholesteryl ester transfer protein: Its role in plasma lipid transport. [Erratum to document cited in CA121:277225]
AU Barter, P.; Rye, K-A.
CS Dep. Med., Univ. Adelaide, Adelaide, Australia
SO Clinical and Experimental Pharmacology and Physiology (1994), 21(11), 933
CODEN: CEXPB9; ISSN: 0305-1870
PB Blackwell
DT Journal; General Review
LA English
AB The errors were not reflected in the abstr. or the index entries.

L3 ANSWER 38 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1994:529841 CAPLUS
DN 121:129841
TI Use of transgenic plants and mutants to study the regulation and function of lipid composition
AU Gibson, S.; Falcone, D. L.; Browse, J.; Somerville, C.
CS Dep. Plant Biol., Carnegie Inst. Wash., Stanford, CA, 94305, USA
SO Plant, Cell and Environment (1994), 17(5), 627-37
CODEN: PLCEDV; ISSN: 0140-7791
DT Journal; General Review
LA English
AB A **review** with 71 refs. Mutants and transgenic plants with altered expression of genes implicated in lipid metab. are providing fresh insights into the regulation and function of lipid compn. To date, several genes encoding fatty acid desaturases, acyltransferases, a thioesterase, a **lipid transfer protein** and an isoform of acyl-carrier protein have been introduced into transgenic plants. Despite the fact that some of these transgenic plants had large alterations in lipid compn., they showed surprisingly little phenotypic variation from wild-type plants. Although detailed analyses of these plants are just beginning, several theories regarding the roles of particular genes in various plant processes, such as cold tolerance and transfer of lipids between membranes, have been either substantiated or discarded on the basis of the data already obtained. In addn., constructs that contain the promoter regions of genes implicated in lipid metab. fused to reporter genes have been introduced into transgenic plants and are providing some clues as to how lipid compn. is regulated.

L3 ANSWER 39 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:327306 CAPLUS
DN 122:101540
TI Recent developments in somatic embryogenesis
AU Jelaska, Sibla
CS Faculty Science, Univ. Zagreb, Zagreb, 41000, Croatia
SO Acta Pharmaceutica (Zagreb) (1994), 44(4), 397-406
CODEN: ACPHEE; ISSN: 1330-0075
PB Croatian Pharmaceutical Society
DT Journal; General Review
LA English
AB A **review** with 79 refs. The most pos. example of plant cell totipotency is the ability of somatic cells to undergo embryogenesis. The morphol. similarities between somatic and zygotic embryos, at least in later development states, may reflect analogous underlying mol. processes. It has been shown that embryogenesis may be enhanced by different sorts of stress. Control of the external medium's pH permits or prevents cell

elongation in embryogenic cultures. The importance of the induction of polarity during the embryo development has been shown. Identification of the biochem. requirements for the development of somatic embryogenesis provides important insights into how an embryo develops and forms. Several reports have indicated that proteins secreted into the medium by carrot cell cultures are accompanied by the formation of embryogenic cells and somatic embryos. A 32 kDa glycoprotein that allows completion of somatic embryo development in the temp -sensitive carrot cell mutant ts11 at nonpermissive temp. has been purified and identified as a glycosylated acidic endochitinase. Another finding showed that a peroxidase that controls cell wall expansion and a **lipid transfer protein** are essential for somatic embryogenesis. Activated Cichorium embryogenic cells showed an influx of Ca2+. Multicellular embryos devoid of a protoderm are lined by an extracellular lipoglycoprotein secretion, with a tubular structure. Influx of Ca2+, callose and extracellular proteins are all known as stress reactions in plant cells. An intercellular communication seems to be included in the developmental events during somatic embryogenesis.

L3 ANSWER 40 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:304242 CAPLUS
DN 122:71189
TI The interaction of liposomal amphotericin B and serum lipoproteins within the biological milieu
AU Wasan, Kishor M.; Lopez-Berestein, Gabriel
CS Immunobiol. Drug Carriers Sect., Dep. Clin. Investigations, Univ. Texas M.D. Anderson Cancer Cent., Houston, TX, 77030, USA
SO Journal of Drug Targeting (1994), 2(5), 373-80
CODEN: JDTAEH; ISSN: 1061-186X
PB Harwood
DT Journal; General Review
LA English
AB A **review** with many refs. Previously, the authors have shown that liposomal amphotericin B (L-AmpB) is less nephrotoxic than and equally as effective as free AmpB in treatment of patients with systemic fungal infections. The mechanism of L-AmpB's enhanced therapeutic index, however, remains unknown. This **review** discusses AmpB's assocn. with lipoproteins, predominantly high-d. lipoproteins (HDL) and the biol. relevance of transferring AmpB to HDL. The authors obsd. that AmpB was less toxic to pig kidney cells when assocd. with HDL but still remains toxic when assocd. with low-d. lipoproteins (LDL). AmpB's assocn. with HDL or LDL does not alter its antifungal activity. The authors further found that these kidney cells express high- and low-affinity LDL receptors but only low-affinity HDL receptors. The reduced renal cytotoxicity of HDL-assocd. AmpB may be due to its lack of interaction with the renal cells, since they have no HDL receptors. Since AmpB interacts with cholesteryl esters in serum, whose transfer between HDL and LDL is regulated by **lipid transfer protein** (LTP), the authors addressed the role of this protein on the distribution of AmpB between HDL and LDL. The addn. of LTP altered the lipoprotein distribution of AmpB but not of L-AmpB. Furthermore L-AmpB, but not AmpB (except at 20 .mu.g/mL), inhibited the LTP-mediated transfer of cholesterol esters from HDL to LDL. It appears therefore, that the decreased nephrotoxicity assocd. with L-AmpB administration is related to its predominant distribution to HDL, which is regulated by inhibition of LTP-mediated cholesterol ester transfer activity.

L3 ANSWER 41 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:137001 CAPLUS
DN 122:51265
TI Expression of genes encoding thionins and lipid-transfer proteins. A combinatorial model for the responses of defense genes to pathogens.
AU Molina, Antonio; Garcia-Olmedo, Francisco
CS Laboratorio de Bioquimica y Biologia Molecular, E.T.S. Ingenieros Agronomos, Madrid, E-28040, Spain
SO NATO ASI Series, Series H: Cell Biology (1994), 81(PLANT MOLECULAR BIOLOGY), 235-44
CODEN: NASBE4; ISSN: 1010-8793
DT Journal, General Review
LA English
AB A **review** and discussion with 16 refs.

L3 ANSWER 42 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1994:479108 CAPLUS
DN 121:79108
TI Interconversions of high density lipoprotein subfractions in human plasma
AU Skottova, Nina; Vecera, Rostislav
CS Med. Fac., Palacky Univ., Olomouc, 775 15, Czech Rep.
SO Chemicke Listy (1994), 88(4), 231-7
CODEN: CHLSAC; ISSN: 0009-2770
DT Journal; General Review
LA English
AB A **review** with 90 refs., reviewing the metab. of high d. lipoprotein (HDL) subfractions in human plasma. Interconversions of HDL2/HDL3 are described including related factors, such as lipolytic

enzymes, lecithin cholesterol acyltransferase and **lipid transfer protein**(s). Special attention is paid to the conversions of apolipoprotein A-specific subpopulations of HDL2 and HDL3, a field intensively studied at present and revealing a key importance of apolipoproteins for the metabolic fate of lipoprotein particles.

L3 ANSWER 43 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1994:432030 CAPLUS
DN 121:32030
TI The molecular basis of abetalipoproteinemia
AU Gregg, Richard E.; Wetterau, John R.
CS Dep. Metab. Dis., Bristol-Myers Squibb Pharm. Res. Inst., Princeton, NJ, USA
SO Current Opinion in Lipidology (1994), 5(2), 81-6
CODEN: COPLEU; ISSN: 0957-9672
DT Journal; General Review
LA English
AB A **review**, with 35 refs. Abetalipoproteinemia is a recessive genetic disease in humans characterized by the virtual absence of apolipoprotein (apo)B and apoB-contg. lipoproteins in plasma. Microsomal triglyceride transfer protein (MTP), a resident **lipid transfer protein** within the endoplasmic reticulum of hepatocytes and enterocytes, has been shown to be absent in enterocytes from subjects with this disease. MTP is a heterodimer of a unique large subunit and protein disulfide isomerae. It has been demonstrated that the absence of MTP in abetalipoproteinemia is secondary to mutations in the gene for the large subunit of MTP. Thus, mutations in the gene for the large subunit of MTP are a cause of abetalipoproteinemia, which indicates that the MTP is a necessary component for the assembly and secretion of apoB-contg. lipoproteins from the liver and intestine.

L3 ANSWER 44 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1994:674557 CAPLUS
DN 121:274557
TI Intracellular lipid transfer proteins and steroidogenesis
AU Rennert, H.; Pfeifer, S. M.; Sakuragi, N.; Mellon, S.; Amsterdam, A.; Billheimer, J. T.; Strauss, J. F.
CS Department Obstetrics and Gynecology, University Pennsylvania Medical Center, Philadelphia, PA, 19104-6140, USA
SO International Congress, Symposium and Seminar Series (1993), Volume Date 1992, 3(PROGRESS IN ENDOCRINOLOGY), 593-6
CODEN: ICGSEM; ISSN: 0969-2622
DT Journal; General Review
LA English
AB A **review**, with 6 refs., on sterol carrier protein 2 - its expression, role in steroidogenesis, structural features in relation to subcellular distribution - and related proteins.

L3 ANSWER 45 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1993:468662 CAPLUS
DN 119:68662
TI Lipid transfer proteins: Catalysts, transmembrane carriers and signalling intermediates for intracellular and extracellular lipid reactions
AU Fielding, Christopher J.
CS Cardiovasc. Res. Inst., Univ. California, San Francisco, CA, USA
SO Current Opinion in Lipidology (1993), 4(3), 218-22
CODEN: COPLEU; ISSN: 0957-9672
DT Journal; General Review
LA English
AB A **review**, with 37 refs., on recent data suggesting that many intracellular and extracellular lipid transfers formerly considered to be spontaneous may be catalyzed by lipid-binding transfer proteins.

L3 ANSWER 46 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1993:405449 CAPLUS
DN 119:5449
TI The non-specific **lipid-transfer protein** (sterol carrier protein 2) and its relationship to peroxisomes
AU Ossendorp, B. C.; Wirtz, K. W. A.
CS Inst. Biomembr., Utrecht Univ., Utrecht, 3508 TB, Neth.
SO Biochimie (1993), 75(3-4), 191-200
CODEN: BICMBE; ISSN: 0300-9084
DT Journal; General Review
LA English
AB A **review**, with 64 refs., of formation and structure and subcellular localization of the nonspecific **lipid-transfer protein**. Some recent developments in studies of its physiol. function are briefly discussed.

L3 ANSWER 47 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1995:563920 CAPLUS
DN 123:80047
TI Regulation of sperm functions by active components in the follicular fluid
AU Lee, Shuang-Lin; Kao, Shu-Huei; Wei, Yau-Huei
CS Department Biochemistry, National Yang-Ming Medical College, Taipei, 112,

Taiwan
SO Recent Adv. Mol. Biochem Res Proteins, Proc. IUBMB Symp. Protein Struct. Funct (1993), Meeting Date 1992, 77-88. Editor(s): Wei, Yau-huei; Chen, Ching-san; Su, Jong-ching. Publisher: World Sci., Singapore, Singapore. CODEN: 61HNAL
DT Conference; General Review
LA English
AB A **review** with 59 refs. Follicular fluid has been shown to exert significant effects on the motility, chemotaxis, capacitation, acrosome reaction, and the ability of zona pellucida-penetration of the mammalian sperm. It has thus been suggested that follicular fluid may play some important roles in the fertilization process. The specific effects of various components in the follicular fluid on the sperm functions have been studied extensively in recent years. Several sperm motility stimulatory proteins of follicular fluids were purified and characterized in this lab. A single-polypeptide glycoprotein with a mol. wt. of 52 kDa was purified from porcine follicular fluid and was shown to stimulate boar sperm motility with an EC50 of about 1 .mu.M. Antithrombin III (AT III) was also found to be a sperm motility stimulator and chemoattractant for boar sperm. We have suggested that AT III may be transported from blood plasma to the follicular fluid and play some roles in the fertilization process in vivo. **Lipid transfer protein** I purified from human follicular fluid has been shown to exhibit capacitation-inducing activity at micromolar concns. Up to the present, heparin and **lipid transfer protein** I are the two active factors in the follicular fluid that have been identified as inducing sperm capacitation. Progesterone is the only component in the follicular fluid that has been demonstrated to induce the acrosome reaction of human sperm in vitro. In this **review**, we focus our attention on the effects of some active components of the follicular fluid on the sperm motility, chemotaxis, capacitation and acrosome reaction and their possible mechanisms of actions

L3 ANSWER 48 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1992:146207 CAPLUS
DN 116:146207
TI Lipid transfer proteins in plants and microorganisms
AU Yamada, Mitsuhiro
CS Sch. Eng., Hokkaido Tokai Univ., Sapporo, 005, Japan
SO Plant and Cell Physiology (1992), 33(1), 1-6
CODEN: PCPHA5; ISSN: 0032-0781
DT Journal; General Review
LA English
AB A **review** with more than 60 refs. Lipid transfer proteins (LTPs) have been isolated as the proteins which transfer lipids between membrane by in vitro assays Phosphatidylcholine-specific LTPs and phosphatidylinositol-specific LTPs are found in higher plants and fungi, resp. LTPs that transfer many classes of lipids nonspecifically are also found in higher plants. The structure, gene expression and function of these LTPs are described.

L3 ANSWER 49 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1991:201827 CAPLUS
DN 114:201827
TI Molecular cell biology of nonspecific **lipid transfer protein** (nsL-TP) and sterol carrier protein 2 (SCP-2)
AU Tashiro, Yutaka; Yamamoto, Akitsugu; Fujiki, Yukio
CS 1st Dep. Physiol., Kansai Med. Univ., Moriguchi, 570, Japan
SO Tanpakushitsu Kakusan Koso (1991), 36(3), 544-53
CODEN: TAKKAJ; ISSN: 0039-9450
DT Journal; General Review
LA Japanese
AB A **review** with 54 refs., on purifn., structure, intracellular localization, and formation of nonspecific **lipid transfer protein** (nsL-TP), which has been said to be identical to sterol carrier protein 2 (SCP2). The localization of nsL-TP in peroxisomes and the defect of this protein obsd. in patients with peroxisome deficiency disorders suggest an important role of nsL-TP in this organelle. The differences in distribution of SCP2 and nsL-TP are considered

L3 ANSWER 50 OF 71 CAPLUS COPYRIGHT 2003 ACS
AN 1991:183394 CAPLUS
DN 114:183394
TI Monoclonal anti-phospholipid antibody. Structure and function
AU Umeda, Masato
CS Fac. Pharm. Sci., Univ. Tokyo, Tokyo, 113, Japan
SO Tanpakushitsu Kakusan Koso (1991), 36(3), 491-505
CODEN: TAKKAJ; ISSN: 0039-9450
DT Journal; General Review
LA Japanese
AB A **review** with 85 refs. on the prodn. and assay method of monoclonal anti-phospholipid antibody, specificities of anti-phosphotidylcholine (PC) and anti-phosphatidylserine (PS) monoclonal antibodies, structural similarity between the PC specific monoclonal

antibody and PC-specific **lipid transfer protein**, and amino acid sequence, gene structure, and induction of monoclonal anti-phospholipid antibody in relation to pathol. condition.

=> s l1 and structure
L4 227 L1 AND STRUCTURE

=> duplicate remove l4
L5 126 DUPLICATE REMOVE L4 (101 DUPLICATES REMOVED)

=> d ti 1-25

L5 ANSWER 1 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
TI Solution **structure** of plant nonspecific **lipid transfer protein**-2 from rice (Oryza sativa.

L5 ANSWER 2 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
TI Purification and characterization of a novel 7-kDa non-specific **lipid transfer protein**-2 from rice (Oryza sativa.

L5 ANSWER 3 OF 126 CAPLUS COPYRIGHT 2003 ACS
TI Sequence and functional similarities between pro-apoptotic Bid and plant lipid transfer proteins

L5 ANSWER 4 OF 126 CAPLUS COPYRIGHT 2003 ACS
TI From elicitins to lipid-transfer proteins: a new insight in cell signalling involved in plant defence mechanisms

L5 ANSWER 5 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
TI Effects of acylation on the **structure**, lipid binding, and transfer activity of wheat **lipid transfer protein**.

L5 ANSWER 6 OF 126 CAPLUS COPYRIGHT 2003 ACS
TI Gene expression profiling in perilesional and contralateral areas after ischemia in rat brain

L5 ANSWER 7 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4
TI Expression, purification and function of rice nonspecific **lipid transfer protein**.

L5 ANSWER 8 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
TI Barley **lipid transfer protein**, LTP1, contains a new type of lipid-like post-translational modification.

L5 ANSWER 9 OF 126 AGRICOLA DUPLICATE 6
TI Evidence of the glycation and denaturation of LTP1 during the malting and brewing process.

L5 ANSWER 10 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 7
TI Disulfide bond assignment, lipid transfer activity and secondary **structure** of a 7-kDa plant **lipid transfer protein**, LTP2.

L5 ANSWER 11 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 8
TI Cyclosporine A transfer between high- and low-density lipoproteins: Independent from **lipid transfer protein** I-facilitated transfer of lipoprotein-coated phospholipids because of high affinity of cyclosporine A for the protein component of lipoproteins.

L5 ANSWER 12 OF 126 CAPLUS COPYRIGHT 2003 ACS
TI Protein dynamics studies on a wheat type 2 **lipid transfer protein**

L5 ANSWER 13 OF 126 AGRICOLA DUPLICATE 9
TI Purification, characterisation and cDNA cloning of a type 2 (7 kDa) **lipid transfer protein** from Triticum durum.

L5 ANSWER 14 OF 126 AGRICOLA DUPLICATE 10
TI Calmodulin-binding protein BP-10, a probable new member of plant nonspecific **lipid transfer protein** superfamily.

L5 ANSWER 15 OF 126 AGRICOLA DUPLICATE 11
TI Transactivation of BARNASE under the AtLTP1 promoter affects the basal pole of the embryo and shoot development of the adult plant in

Arabidopsis.

L5 ANSWER 16 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 12
TI Binding of two mono-acylated lipid monomers by the barley **lipid transfer protein**, LTP1, as viewed by fluorescence, isothermal titration calorimetry and molecular modelling.

L5 ANSWER 17 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Roles of plasma lipid transfer proteins in reverse cholesterol transport.

L5 ANSWER 18 OF 126 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 13
TI Structural Basis of Non-specific Lipid Binding in Maize **Lipid-transfer Protein** Complexes Revealed by High-resolution X-ray Crystallography

L5 ANSWER 19 OF 126 CAPLUS COPYRIGHT 2003 ACS
TI Amino acid sequence and molecular modelling of a **lipid transfer protein** from sunflower (Helianthus annus L.) seeds

L5 ANSWER 20 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 14
TI Determination of the primary **structure** of two lipid transfer proteins from apricot (Prunus armeniaca.

L5 ANSWER 21 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 15
TI **Lipid transfer protein**: A pan-allergen in plant-derived foods that is highly resistant to pepsin digestion.

L5 ANSWER 22 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 16
TI Hypoallergenic variants of the Parietaria judaica major allergen Par j 1: A member of the non-specific **lipid transfer protein** plant family

L5 ANSWER 23 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 17
TI A **lipid transfer protein** binds to a receptor involved in the control of plant defence responses.

L5 ANSWER 24 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Phospholipid transfer proteins and physiological functions.

L5 ANSWER 25 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
DUPLICATE 18
TI **Structure** of sterol carrier protein 2 at 1.8 ANG resolution reveals a hydrophobic tunnel suitable for lipid binding.

=> d bib abs 19 14 10

L5 ANSWER 19 OF 126 CAPLUS COPYRIGHT 2003 ACS
AN 2001:590258 CAPLUS
DN 136:228460
TI Amino acid sequence and molecular modelling of a **lipid transfer protein** from sunflower (Helianthus annus L.) seeds
AU Luckett, Suzanne; Sessions, Richard B.; Michaelson, Louise; Naldrett, Michael J.; Clarke, Anthony R ; Fido, Roger; Tatham, Arthur S.; Shewry, Peter R
CS IACR-Long Ashton Research Station, Department of Agricultural Sciences, Biochemistry Department, School of Medical Sciences, University of Bristol, Bristol, BS41 9AF, UK
SO Protein and Peptide Letters (2001), 8(4), 241-248
CODEN: PPELEN; ISSN: 0929-8665
PB Bentham Science Publishers
DT Journal
LA English
AB The major **lipid transfer protein** has been purified from sunflower seeds and its amino acid sequence detd. An homol. model has been built based on the rice LTP, which suggests that the protein can bind palmitic acid. The sequence may therefore correspond to previously characterized proteins with lipid transfer and antifungal activities.
RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 14 OF 126 AGRICOLA DUPLICATE 10
AN 2001 65231 AGRICOLA
DN IND23225087
TI Calmodulin-binding protein BP-10, a probable new member of plant nonspecific **lipid transfer protein** superfamily.

AU Liu, H.; Xue, L.; Li, C.; Zhang, R.; Ling, Q.
AV DNAL (442.8 B5236)
SO Biochemical and biophysical research communications, July 20, 2001. Vol. 285, No. 3. p. 633-638
Publisher: Orlando, Fla. : Academic Press.
CODEN BBRCA9; ISSN: 0006-291X
NTE Includes references
CY Florida; United States
DT Article
FS U.S. Imprints not USDA, Experiment or Extension
LA English

L5 ANSWER 10 OF 126 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. DUPLICATE 7
AN 2001:197962 BIOSIS
DN PREV200100197962
TI Disulfide bond assignment, lipid transfer activity and secondary **structure** of a 7-kDa plant **lipid transfer protein**, LTP2.
AU Douliez, Jean-Paul (1); Pato, Christine; Rabesona, Hanitra; Molle, Daniel; Marion, Didier
CS (1) Laboratoire de Biochimie et Technologie des Proteines, INRA, rue de la Geraudiere, 44316, Nantes: douliez@nantes.inra.fr France
SO European Journal of Biochemistry, (March, 2001) Vol. 268, No. 5, pp. 1400-1403. print.
ISSN: 0014-2956.
DT Article
LA English
SL English
AB The 7-kDa lipid transfer proteins, LTP2s, share some amino-acid sequence similarities with the 9-kDa isoforms, LTP1s. Both proteins display an identical cysteine motif and, in this regard, LTP2s have been classified as lipid transfer proteins. However, in contrast with LTP1s, no data are available on their **structure**, cysteine pairings, lipid transfer and lipid binding properties. We reported on the isolation of two isoforms of 7-kDa **lipid transfer protein**, LTP2, from wheat seeds and showed for the first time that they indeed display lipid transfer activity. Trypsin and chymotrypsin digestions of the native LTP2 afforded the sequence of both isoforms and assignment of disulfide bonds. The cysteine pairings, Cys10-Cys24, Cys25-Cys60, Cys2-Cys34, Cys36-Cys67, revealed a mismatch at the Cys34-X-Cys36 motif of LTP2 compared to LTP1. Moreover, the secondary **structure** as determined by circular dichroism suggested an identical proportion of alpha helices, beta sheets and random coils. By analogy with the **structure** of the LTP1, we discussed what structural changes are required to accommodate the LTP2 disulfide pattern.

=> s l1 and sunflower
L6 10 L1 AND SUNFLOWER

=> duplicate remove l6
L7 7 DUPLICATE REMOVE L6 (3 DUPLICATES REMOVED)

=> d ti 1-7

L7 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI **Sunflower** genes induced by infection with Sclerotinia and their promoters and their uses

L7 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Plant defense-inducible genes and their use in improving disease resistance in transgenic plants

L7 ANSWER 3 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
TI Amino acid sequence and molecular modelling of a **lipid transfer protein** from **sunflower** (Helianthus annus L.) seeds.

L7 ANSWER 4 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI Interaction of a **sunflower** antifungal LTP with model membranes.

L7 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
TI Purification, characterization and antifungal properties of a **lipid-transfer protein** from **sunflower** (Helianthus annuus) seeds.

L7 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Identification and expression of water stress- and abscisic acid-regulated genes in a drought-tolerant **sunflower** genotype

L7 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2003 ACS
TI Bifunctional lipid-transfer: fatty acid-binding proteins in plants

=> d bib abs 4 5 6

L7 ANSWER 4 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2001:115028 BIOSIS
DN PREV200100115028
TI Interaction of a **sunflower** antifungal LTP with model membranes.
AU Regente, M. C. (1); Contreras, L. M.; Villalain, J., de la Canal, L. (1)
CS (1) Instituto de Investigaciones Biologicas, Universidad Nacional de Mar del Plata, 7600, Mar del Plata Argentina
SO Biochemical Society Transactions, (October, 2000) Vol 28, No. 5, pp. A405. print.
Meeting Info.: 18th International Congress of Biochemistry and Molecular Biology Birmingham, UK July 16-20, 2000
ISSN: 0300-5127.
DT Conference
LA English
SL English

L7 ANSWER 5 OF 7 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
AN 2001:12124 BIOSIS
DN PREV200100012124
TI Purification, characterization and antifungal properties of a **lipid-transfer protein** from **sunflower** (Helianthus annuus) seeds.
AU Regente, Mariana C.; de la Canal, Laura (1)
CS (1) Instituto de Investigaciones Biologicas, Universidad Nacional de Mar del Plata, 7600, Mar del Plata: ldelacan@mdp.edu.ar Argentina
SO Physiologia Plantarum, (October, 2000) Vol. 110, No. 2, pp. 158-163. print.
ISSN: 0031-9317.
DT Article
LA English
SL English
AB An antifungal protein from Helianthus annuus L. seeds (Ha-AP10) has been purified to homogeneity and characterized. Ha-AP10 purification was performed by gel filtration, cation exchange chromatography and reverse phase HPLC. Its molecular mass was estimated to be 10 kDa and western blot analyses suggest that it has an extracellular location. The N-terminal sequence of Ha-AP10 showed strong homology to some plant lipid-transfer proteins (LTPs). Antifungal tests have demonstrated that Ha-AP10 exerts a fungistatic effect. It completely inhibits the germination of spores of the fungal pathogen Fusarium solani f. sp. eumartii at a concentration of 40 mug ml-1 and produces a 50% growth inhibition at 6 5 mug ml-1 (0.65 muM). These data place Ha-AP10 among the most potent antifungal LTPs described so far.

L7 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2003 ACS
AN 1996:574774 CAPLUS
DN 125:243179
TI Identification and expression of water stress- and abscisic acid-regulated genes in a drought-tolerant **sunflower** genotype
AU Ouvrard, Olivier; Cellier, Francoise; Ferrare, Karine, Tousch, Didier; Lamaze, Thierry; Dupuis, Jean-Marc; Casse-Delbart, Francine
CS Biochim. Physiol. Veg., CNRS, Montpellier, 34060, Fr.
SO Plant Molecular Biology (1996), 31(4), 819-829
CODEN: PMBIDB; ISSN: 0167-4412
PB Kluwer
DT Journal
LA English
AB We have studied two lines of **sunflower** (Helianthus annuus L.) selected in the field as drought-tolerant (R1 genotype) or drought-sensitive (S1 genotype). When subjected to drought conditions, the R1 line was able to maintain high leaf water potential longer and wilted later than the S1 line. Therefore, this indicates that R1 tolerance includes a leaf-adaptive response. By subtractive hybridization, we have isolated six different cDNAs (designated sdi for **sunflower** drought-induced) corresponding to transcripts accumulated in R1 and S1 leaves during adaptive response. Anal. of transcript accumulation in response to drought in both genotypes suggests a preferential expression of three sdi genes in the tolerant line. Abscisic acid-mediated induction, analyzed in R1 leaves, was obsd. for only four sdi genes. Sequence anal. of six sdi clones revealed that five clones were related to known proteins including non specific lipid transfer proteins (nsLTP), early light-induced proteins (ELIP), 1-aminocyclopropane-1-carboxylate oxidase (ACC oxidase) or dehydrins, predicted to be involved in a wide range of physiol. processes.

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=> s acyl and lipid and transfer and rape

L1 16 ACYL AND LIPID AND TRANSFER AND RAPE

=> duplicate remove l1
L2 9 DUPLICATE REMOVE L1 (7 DUPLICATES REMOVED)

=> d ti 1-9

L2 ANSWER 1 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI **Lipid** binding proteins from plants.

L2 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS
TI Polyunsaturated fatty acid metabolism in atlantic salmon (Salmo salar) undergoing parr-smolt transformation and the effects of dietary linseed and rapeseed oils

L2 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2003 ACS
TI The effect of dietary **lipid** on polyunsaturated fatty acid metabolism in Atlantic salmon (Salmo salar) undergoing parr-smolt transformation

L2 ANSWER 4 OF 9 AGRICOLA DUPLICATE 1
TI Amino acid sequences of three **acyl**-binding/**lipid**-**transfer** proteins from **rape** seedlings.

L2 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS
TI process for producing a reduced calorie **lipid** composition

L2 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS
TI **Acyl**-binding/**lipid-transfer** proteins from **rape** seedlings, a novel category of proteins interacting with lipids. [Erratum to document cited in CA119(25):266506p]

L2 ANSWER 7 OF 9 AGRICOLA DUPLICATE 2
TI **Acyl**-binding/**lipid-transfer** proteins from **rape** seedlings, a novel category of proteins interacting with lipids.

L2 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
TI Modification of Brassica seed oil by antisense expression of stearoyl-**acyl** carrier protein desaturase gene

L2 ANSWER 9 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
TI METABOLISM OF LONG CHAIN ALCOHOLS IN CELL SUSPENSION CULTURES OF SOY GLYCINE-MAX AND **RAPE** BRASSICA-NAPUS.

=> d bib abs 1 4 7

L2 ANSWER 1 OF 9 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
AN 2003:41263 BIOSIS
DN PREV200300041263
TI **Lipid** binding proteins from plants.
AU Kader, Jean-Claude (1); Guerbette, Francoise (1); Vergnolle, Chantal (1); Zachowski, Alain (1)
CS (1) Laboratoire de Physiologie Cellulaire et Moleculaire, Unit 7632, CNRS/Universite Paris 6, 4 Place Jussieu, 75252, Case 154, Paris Cedex 05, France: kader@ccr.jussieu.fr France
SO Plant Biology (Rockville), (2001) Vol. 2001, pp. 109. print.
Meeting Info.: Joint Annual Meetings of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists Providence, Rhode Island, USA July 21-25, 2001 American Society of Plant Biologists .
DT Conference
LA English

L2 ANSWER 4 OF 9 AGRICOLA DUPLICATE 1
AN 96:7219 AGRICOLA
DN IND20495242
TI Amino acid sequences of three **acyl**-binding/**lipid**-**transfer** proteins from **rape** seedlings.
AU Ostergaard, J.; Hojrup, P.; Knudsen, J.
CS Odense University, Odense M, Denmark.
AV DNAL (381 B522)
SO Biochimica et biophysica acta = International journal of biochemistry and biophysics, Jan 20, 1995. Vol. 1254, No. 2. p. 169-179
Publisher: Amsterdam : Elsevier Science B.V.
CODEN: BBACAQ; ISSN: 0006-3002
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB The complete amino acid sequence of three **acyl**-binding/**lipid-transfer** proteins, AB/LTP I, AB/LTP II and AB/LTP III from germinated **rape** seeds were determined. AB/LTP I and

AB/LTP II consist of 93 residues and the Mr was determined as 9408 by mass spectrometry and calculated as 9406.8 from the sequence. AB/LTP III consists of 92 residues and the Mr was determined as 9424 by mass spectrometry and calculated as 9422.8 from the sequence. The primary structures were determined by automated Edman degradations of the intact proteins and peptides obtained from digestion with trypsin and endoproteinase Asp-N and cyanogen bromide cleavage. Use of 252Cf plasma-desorption mass spectrometry facilitated the identification and verification of peptides.

L2 ANSWER 7 OF 9 AGRICOLA DUPLICATE 2
AN 94:38093 AGRICOLA
DN IND20392371
TI **Acyl**-binding/**lipid**-**transfer** proteins from **rape** seedlings, a novel category of proteins interacting with lipids.
AU Ostergaard, J.; Vergnolle, C.; Schoentgen, F ; Kader, J.C.
AV DNAL (381 B522)
SO Biochimica et biophysica acta = International journal of biochemistry and biophysics, Oct 13, 1993. Vol. 1170, No. 2. p. 109-117
Publisher: Amsterdam : Elsevier Science Publishers.
CODEN: BBACAQ; ISSN: 0006-3002
NTE Includes references
CY Netherlands
DT Article
FS Non-U.S. Imprint other than FAO
LA English
AB From **rape** (Brassica napus) seedlings proteins able to bind fatty acids and their CoA-esters were purified by gel filtration and cation-exchange chromatography. Among the four proteins detected, one of them (peak IV) appeared purified to homogeneity. This protein is a monomer with a molecular mass of about 9 kDa, as estimated by gel filtration and by polyacrylamide gel electrophoresis. The isoelectric point of the **rape** protein was higher than 10.5 as determined by chromatofocusing. The pure **rape** protein appeared furthermore to be able to **transfer** several phospholipids (phosphatidylcholine, phosphatidylinositol and phosphatidylethanolamine) between membranes. The **rape** protein, having a multifunctional property, was thus called **acyl**-binding/**lipid**-**transfer** protein (AB-LTP). In order to compare this protein to plant **lipid**-**transfer** proteins (LTPs), its structure was determined. The amino acid analysis of the **rape** AB-LTP revealed a high amount of alanine, an absence of histidine and tryptophan and the presence of eight cysteine residues. The N-terminal amino acid sequence of the **rape** protein revealed a high homology to plant LTPs. These observations led us to propose that the **rape** AB-LTPs belong to a category of plant proteins interacting with lipids and playing a role in the fatty acid dynamics.

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STN INTERNATIONAL SESSION SUSPENDED AT 11:36:05 ON 05 MAR 2003